

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Election/Restriction

The provisional election of group I claims 1-5 made telephonically on 9/19/07, is hereby confirmed.

Claim Status

In this response claims 1, 2 and 4 have been amended to improve form and syntax and to further clarify the subject matter for which protection is sought. New claims 8 and 9 readable on the election are added.

Rejections under 35 USC § 102/103

1) The rejection of claims 1 and 4 under 35 USC § 102(b) or in the alternative § 103(a), as being either anticipated by or obvious in light of the disclosure of Che et al. (Che) is respectfully traversed.

First, the anticipation aspect of this rejection is rendered moot by clearly the admission that the Che reference does not disclose the claimed requirement of a "backbone of metallocane and hydrocarbon bonds."

The subsequent attempt to assert that this feature would be inherent, is traversed in that irrespective of what is taught in Nakanishi, if something is to be inherent it must occur in each and every instance and not just in sporadic instances or even in a majority of instances. At the very least, on page 69, the first paragraph left column opens with the statement that sol-gel

transitions of meal alkoxide solutions is generally caused by two kinds of reactions, i.e., hydrolysis and polycondensation.

Unless, it can be shown that both of these types of reaction would lead to the same structure, then the inherency position is without merit. A clear showing by example that the position taken in this rejection would occur in each and every instance is necessary. Without this, the rejection cannot be deemed tenable and should be withdrawn.

A further shortcoming is that Che is directed to a microporous inorganic oxide glass monolith structure with exceptional properties for specialized optical applications (see column 2, lines 3-7). Column 6, lines 46-60 discloses:

A conventional sol-gel derived microporous glass monolith does not have a high degree of pore uniformity, as visually evidenced by schlieren. A present invention microporous glass monolith has an exceptional uniformity of pore size distribution.

A conventional microporous glass monolith typically exhibits a higher degree of light scattering than does a present invention glass monolith, when a He-Ne laser beam is transmitted through the monoliths. The degree of scattering increases as the pore uniformity decreases and the pore size increases.

It is believed that **superior properties are imparted** to a present invention microporous glass monolith **by the use of trioxane** in the invention sol-gel process because of three factors.

First, trioxane functions as an excellent drying control additive in step(2) of the sol-gel process because it has an ideal vapor pressure for purposes of a controlled **slow rate of evaporation** under the step(2) drying conditions.

Second, trioxane tends to function as a viscosity enhancing diluent, with a resultant moderation of the sol-gel hydrolysis, and condensation reactions.

Third, **trioxane has a combination of molecular size, structural conformation and assembly of elements** which under sol-gel process conditions may allow the trioxane molecules to function as "templates" **which enhance the small size and uniformity of pore formation in the three-dimensional inorganic oxide network.**

(Emphasis added)

The question therefore arises as to why the hypothetical person of ordinary skill would consider the modification proposed in this rejection (in connection with the obviousness aspect of the rejection) if it would possibly interfere with the clarity of the glass monolith that is sought after by Che.

Further, Che is not directed to supporting a catalyst as inferred in this rejection - it being noted that the terms "support" and "catalyst" are not found anywhere in the Che disclosure. Indeed, Che is such as to suggest that the product of the disclosed process can be used as an optical component in a light modulating or switching device. See column 9, lines 14-18 wherein it is stated:

The composite monolith exhibits third order nonlinear optical susceptibility $\chi^{(3)}$, and has utility as an optical component in a light modulating or switching device.

It is submitted that there is nothing in the Che document that would lead to what is purported to be obvious in this rejection. Indeed, it appears that it is the claims that are being used to lead to the conclusion of obviousness.

Attention is called to *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971) which teaches that any judgment on obviousness is in a sense necessarily a reconstruction of based upon hindsight reasoning, but so long as it takes into account **only** knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and **does not include knowledge gleaned only from the applicant's disclosure**, reconstruction is proper. (Emphasis added)

It would take more than knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made, to conclude the process disclosed in Che needs to be/could be changed in the manner purported to be obvious so that the claimed method could be reached.

2) The rejection of claim 2 under 35 USC § 103(a) as being unpatentable over Che in view of the paper "Pore Structure Control Silica Gels" to Nakanishi, is respectfully traversed.

As noted above Che is directed to providing ". . . a novel sol-gel process embodiment for producing a microporous inorganic oxide glass monolith structure with exceptional properties for specialized **optical** applications." (Emphasis added). In light of this, it is submitted that the hypothetical person of ordinary skill would not look to Nakanishi and consider a transfer of

teachings without some reassurance that the optical qualities of the resulting product would be acceptable. That is to say, unless the optical characteristics which are disclosed in Che can be maintained any transfer of teachings would amount to rendering the Che arrangement at least partially inoperative for its intended purpose.

3) The rejection of claim 3 under 35 USC § 103(a) as being unpatentable over Che in view of USP 5,624,875 to Nakanishi (Nakanishi'875), is respectfully traversed.

As noted above, Che requires certain optical properties to be achieved by its disclosed process. Nakanishi'875 is devoid of any suggestion of this and indeed the rejection is such as point out the Nakanishi'875 can be used to produce structures such as catheter needles and the like which clearly do not require any optical properties for their intended function. As will be appreciated, this is totally incompatible with the intent of Che which leads toward using the disclosed process for producing optical components in light modulating or switching devices.

There is therefore nothing in these documents which would lead to the purportedly obvious combination.

In this instance also, a full working knowledge of the claimed subject matter appears to be used as a guide to rejection. This is improper. As the examiner knows, in order to establish a *prima facie* case of obviousness, it is necessary to show that the hypothetical person of ordinary skill would, without any knowledge of the claimed subject matter and without any inventive activity, be motivated to arrive at the claimed subject matter given the guidance of the cited references when each is fully considered as statutorily required.

In this case, it is submitted that the intention of Che to produce optically appropriate elements is being ignored to the

degree that the proposed modification(s) may very well result in the products of Che being inoperative for their intended purpose.

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). M.P.E.P. § 2143.01.

4) The rejection of claim 5 under 35 USC § 103(a) as being unpatentable over Che in view of Rolison, et al. is respectfully traversed.

As noted above, Che is not intended to be a support for a catalyst and is directed to providing optically transmissive components. Therefore, the need for a reactive site for titanium oxide or the like type of catalysts, is non-existent.

This rejection is therefore similar to those discussed *supra* in that the addition of an active site and catalyst particles would, without disclosure to contrary, be deemed highly apt to interfere with the optical properties sought after by Che (which does not require sites for catalysts and the like anyway).

The chances that the Che arrangement being rendered unsatisfactory for its intended purpose must be deemed sufficient to affect the thinking of the hypothetical person of ordinary skill and attenuate any consideration of transferring teachings to the Che process.

Conclusion

It is respectfully submitted that the claims as they have been amended are allowable over the art which has been applied in this Office Action for at least the reasons advanced above. Favorable

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reconsideration and allowance of this application are courteously solicited.

Respectfully Submitted,

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